

### **REMARKS/ARGUMENTS**

The August 4, 2006 Office Action objects to Claim 60, rejects claim 56 under 35 U.S.C. 112, second paragraph and rejects claims 59, and 61-65 under 35 U.S.C.112, first paragraph. In light of the amendments above and the arguments below, Applicants respectfully request reconsideration.

#### **Claim Objections**

Applicant has redrafted Claim 60 so that it is independent of rejected claim 59. Applicants have incorporated the language of claim 59 into claim 60.

#### **35 U.S.C. 112 Second Paragraph Rejection**

Claim 56 is rejected as indefinite on the ground that it refers to claim 1 and claim 1 has been cancelled. Applicants have cancelled claims 56-58.

#### **35 U.S.C. 112 First Paragraph Rejection**

The Office Action has rejected claims 59 and 61-65 as “containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention”. The Office Action notes that the claims are directed “to all possible methods of preparing a cDNA molecule or amplifying a nucleic acid molecule comprising mixing any RNA template with any DNA polymerase derived from *B. stearotherophilus* type strain 5 in the presence of at least 1mM magnesium and in the substantial absence of manganese ions and incubating under conditions sufficient

to amplify a DNA molecules.” The Examiner characterizes the specification as only providing the representative methods of use that “DNA polymerase isolated from *B. stearothermophilus* strain ATCC number 12980, encompassed by these claims.”

Applicants disagree with the Examiner’s characterization of the specification and assert that the polymerase species of claims 60 and 61 are specifically disclosed. For example, Applicants note that the specification describes a specific and defined Bst DNA polymerase large fragment (see specification, beginning at page 12, line 5). Applicants note that claim 61 defines the Bst DNA polymerase “large fragment” by both its size and its activity. Applicants have amended claim 61 to note that this purified large fragment is a result of a subtilisin digest also described in the specification. Claim 62 has been cancelled as being duplicative.

The limitation of claim 61 is based, in part, on the following considerations: (1) subtilisin digests proteins at specific amino acid sequences; (2) the purified Bst DNA polymerase large fragment resulting from subtilisin digestion of the full-length Bst DNA polymerase encoded by *Bacillus stearothermophilus* (Bst) type strain 5 (ATCC strain number 12980) is a single band on a PAGE gel, consisting of a substantially homogeneous protein (sold by EPICENTRE Biotechnologies since at least 1994 under the trademark of "IsoTherm DNA Polymerase" and, therefore, available to all); and (3) the methods for making the protein by subtilisin digestion and further purification are described in the specification of the present application. The claimed methods for using both the full-length Bst DNA polymerase of claim 60 and the purified Bst DNA polymerase large fragment of claim 61 are also described in the "Examples" section of the present specification (e.g., see Example 1 of the present application).

Claims 59 and 65 have been cancelled in the interest of speeding prosecution although Applicants neither agree nor acquiesce with the Examiner's characterization. Note that the dependency of claims 63-64 has been changed and that Applicants have added new claims 66 and 67, mimicking claims 63 and 64 except with dependency to claim 60. Applicants believe that the objections and rejections of the Examiner have been satisfied.

#### Fees

A petition for a two month extension of time accompanies this response so that the response is timely filed. No other extension of time is believed due, but should any additional extension be due, in this or any subsequent response, please consider this to be a petition for the appropriate extension and a request to charge the extension fee to Deposit Account No. 17-0055. In addition, a fee in the amount of \$50.00 for new claims numbered 66 and 67 is included; if any additional fees are due, in this or any subsequent response, please charge Deposit Account 17-0055.

Respectfully submitted,

Date: \_\_\_\_\_

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By: \_\_\_\_\_

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